

LAMP® Stackable PARTITION DOOR SYSTEM FDP40P Installation Manual(Parallel Stacking)

Thank you very much for selecting our product.

Before installation, please read this manual carefully to ensure proper installation.

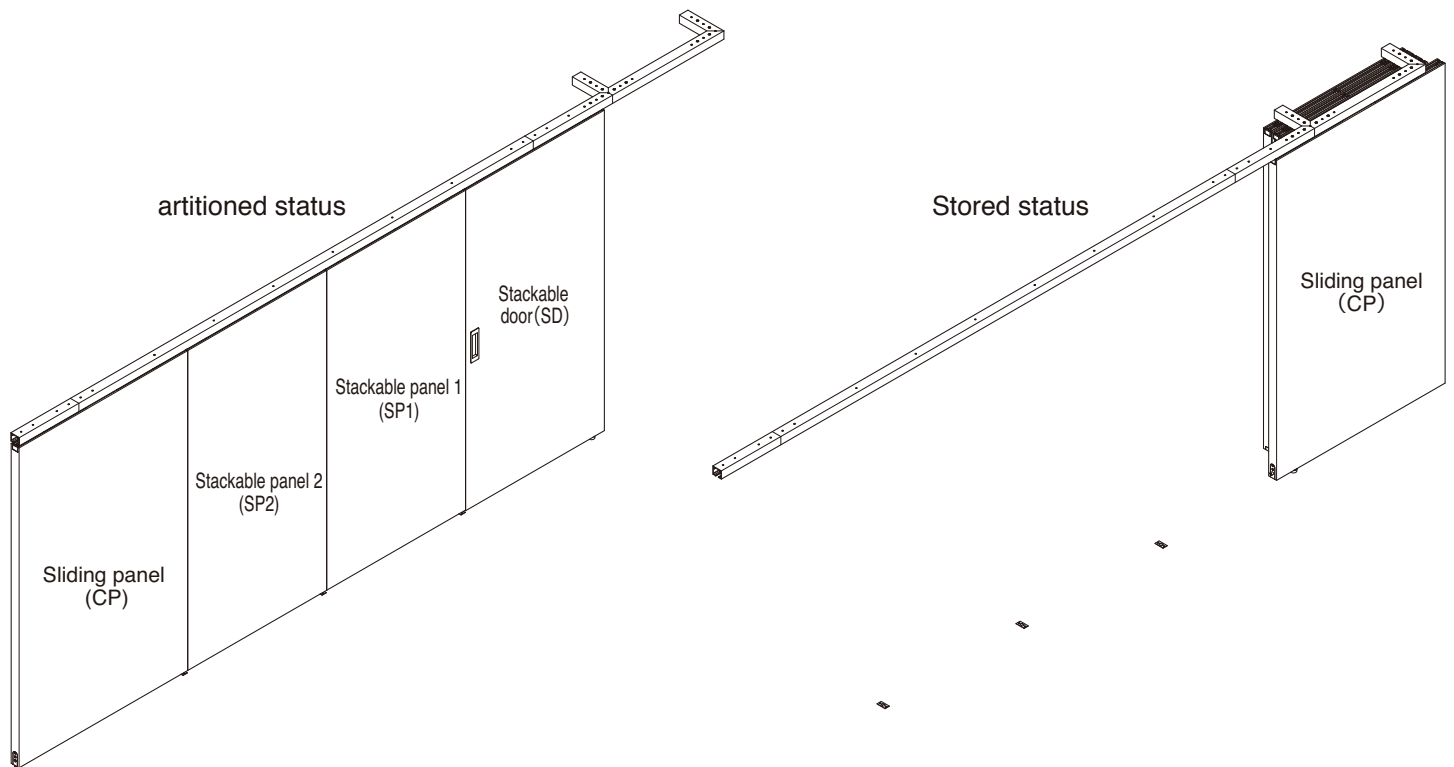
■ About this product

This product is parts set for installation of sliding partition for indoor use.

It is possible to store Stackable panels at a side in parallel.

Since panels are suspended, no bottom rail is needed. Thanks to exclusively designed rollers, smooth movement of panels are realized.

4 panels Storing panels at right side



■ SPECIFICATION

Panel width		Stackable door * height	Panel thickness	Panel weight (each panel)	Panel vertical adjust range
Stackable door, Stackable panel	Sliding panel				
700 ~ 1000mm	700 ~ 1300mm	Less than 2500mm	34 ~ 40mm	Less than 40kg	Upward: 0mm Downward: 7mm

* Other panels must be 3mm smaller than Stackable door.

■ FOR SAFE INSTALLATION

⚠ symbol denotes the contents requiring caution or warning.

⊘ symbol denotes the contents which should be avoided.

❗ symbol means instruction which is to be kept or followed.

⚠ WARNING

If this warning is not kept, injury or damage to adjacent furniture may be resulted.

⚠ Installation of this product should be done by experienced person. Follow instructions on this manual. If this product is not installed correctly, door may be able to work correctly causing damage and injury.

⊘ This product should be used according correct purpose. Do not disassemble or make modification. Avoid using the product out of specification explained in this manual. If accident or injury is resulted by above usage, we have no responsibility on mistaken application.

❗ When manufacturing door and frame, consider their strength which is able to support door weight and schlock upon closing/opening door. The door or frame with insufficient strength may cause poor door operation. In worst case, the door will be dropped down. It is very dangerous.

⚠ PRECAUTIONS UPON INSTALLATION

● **Work with two or more persons.**

Especially, when installing door or panels, two or more persons are needed. Take care to avoid excessive inclination of door or panel as this may cause roller damage or damaging ceiling.

● **Wood having sufficient strength must be used as core material for upper rail installation or door metal installation.**

● **When using electric tool, pay attention to avoid over-tightening.**

Over-tightening may cause part deformation or damage of Phillips head.

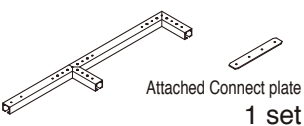
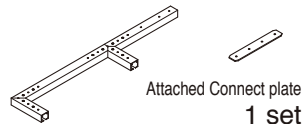
● **After part installation, confirm that parts are securely fixed.**

Confirm tightening status of upper rail with door suspension part. Insufficient tightening causes drop of door.

● **During installation, take care not to damage ceiling or the like.**


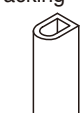

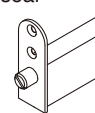

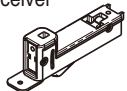
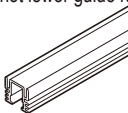
Use protective material on the floor to avoid damage of floor or part.

■ COMPONENT PART

Left or right Stacking	No. of panel	①	②	③	④	⑤	⑥	⑦	⑧
		Upper rail	Stacking rail	Upper roller set, for Stackable door	Upper roller set, for Stackable panel	Upper roller set, for Sliding panel	Sliding door stopper	Hanging Bracket (two)	End cap
Left Stacking	3	1	 Attached Connect plate 1 set	1 set	1 set	1 set	1	3set	6
	4				2 set				
Right Stacking	3	1	 Attached Connect plate 1 set	1 set	1 set	1 set	1	3set	6
	4				2 set				

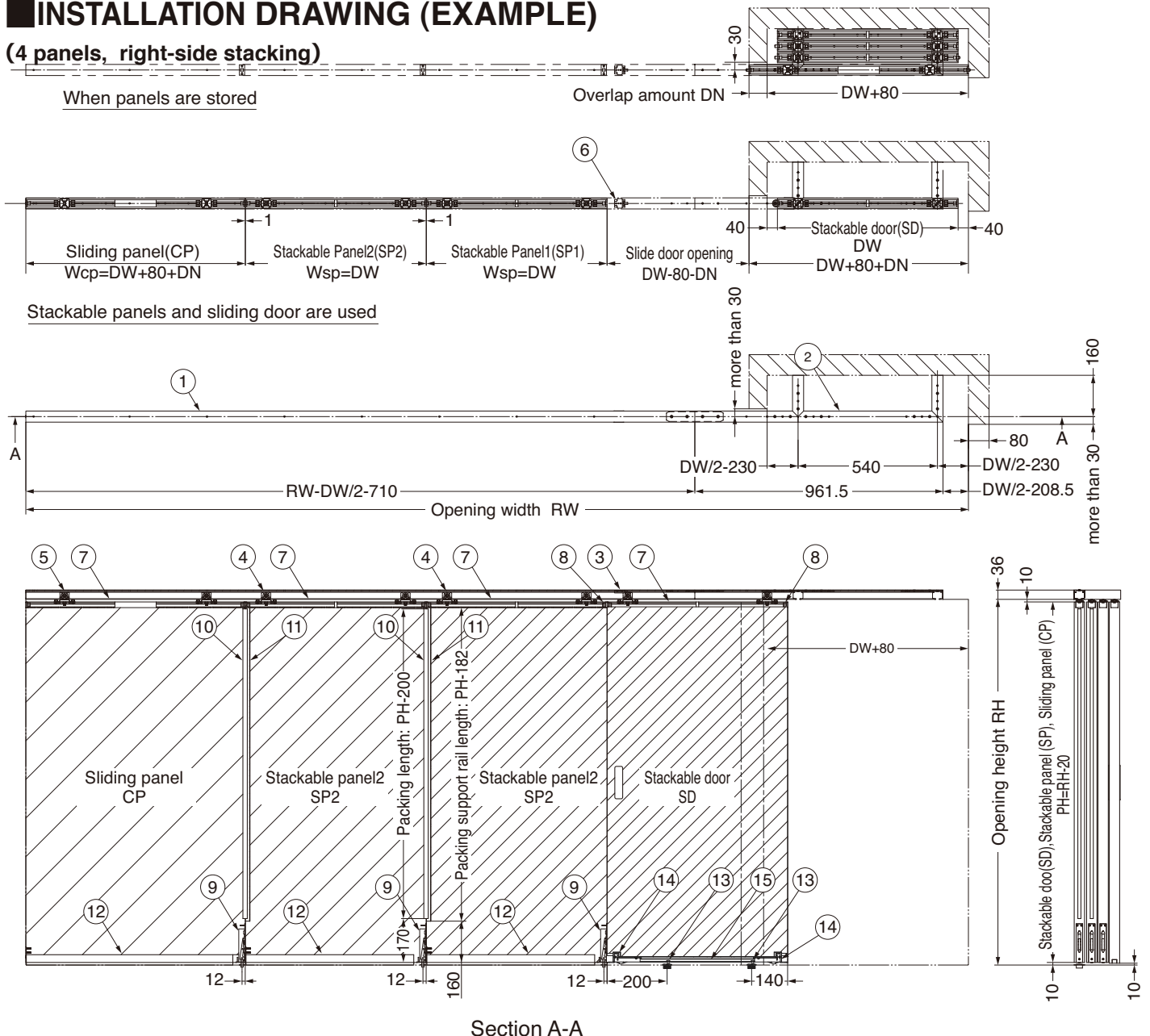
Note) Quantity of panels include Stackable door.

* Accessory: one adjust spanner.

【OPTION】	⑨	⑩	⑪	⑫	⑬	⑭	⑮
No. of Panel	Flush bolt 	Packing 	Packing support rail 	Bottom seal 	Magnet lower guide pin 	Magnet lower guide receiver 	Magnet lower guide rail 
3	2	1	1	2	2	2	1
4	3	2	2	3			
	Must be used on Stackable panel for fixing	Using to cover joints between panels Use together with flush bolt	To cover gap between panel bottom and floor together with flush bolt		Used for steady rest for stackable door. Use ⑬ , ⑭ and ⑮ as a set.		

■ INSTALLATION DRAWING (EXAMPLE)

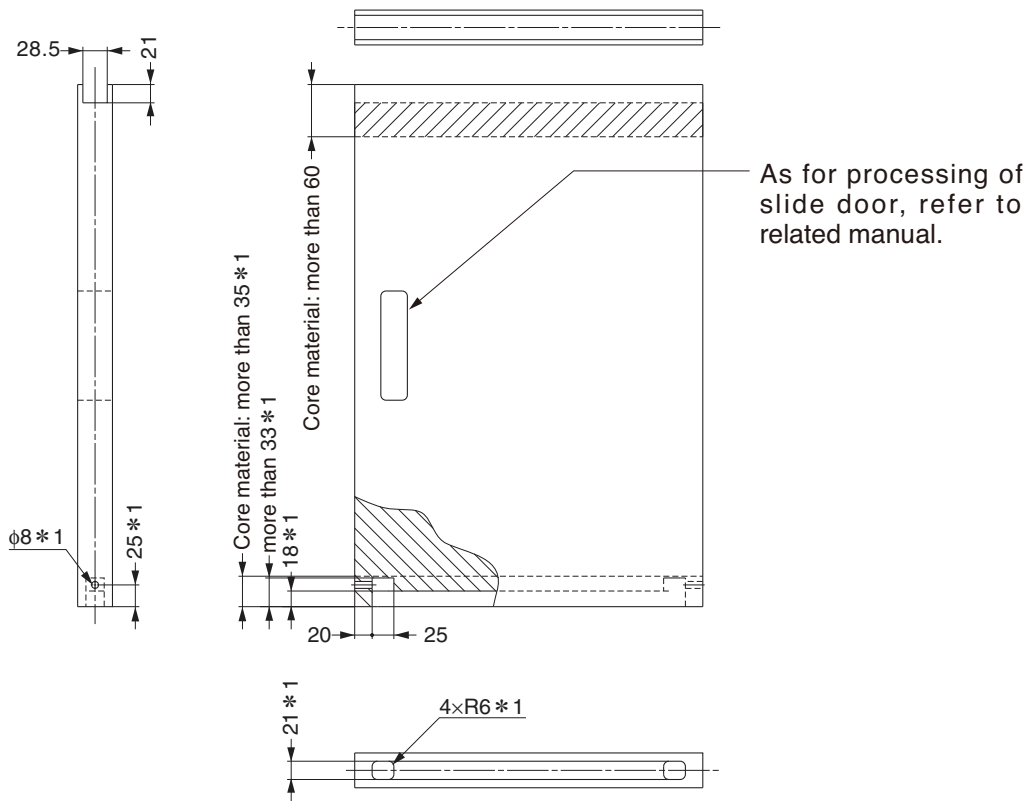
(4 panels, right-side stacking)



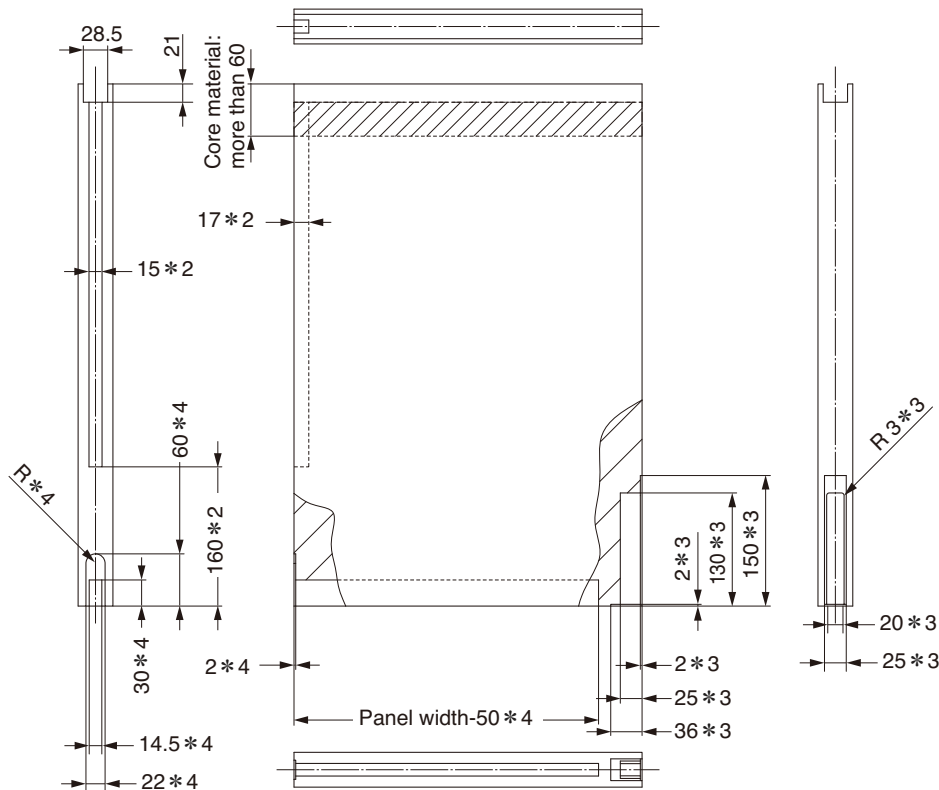
* Height of stackable door : Manufacture so that 3mm higher than other panels.

PROCESSING PANEL CUT-OFF

● Stackable door (SD)



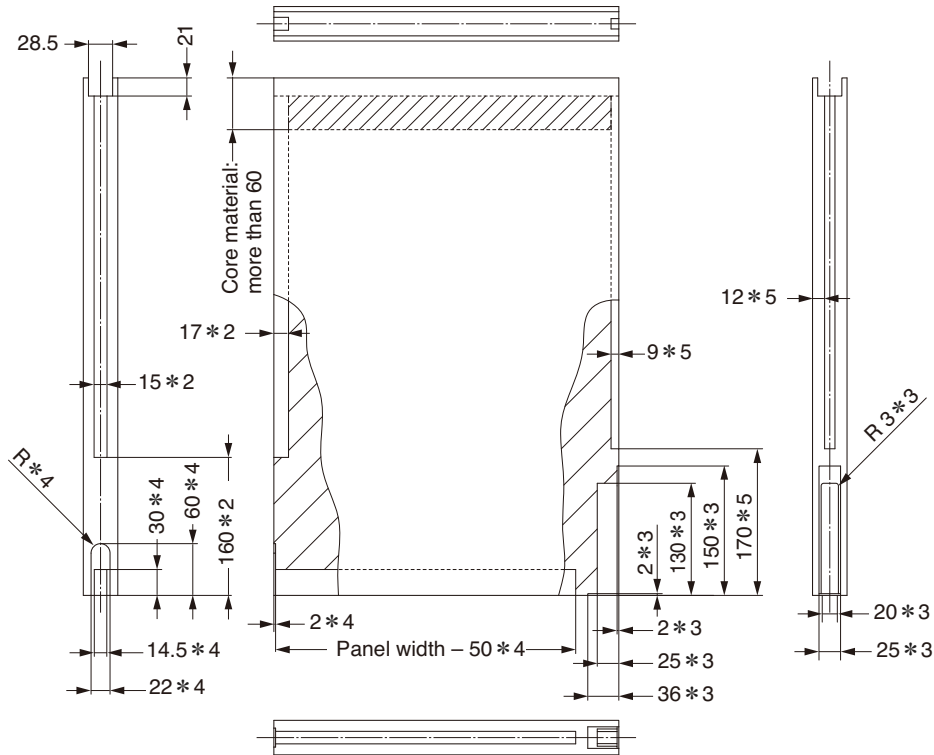
● Stackable panel 1 (SP1)



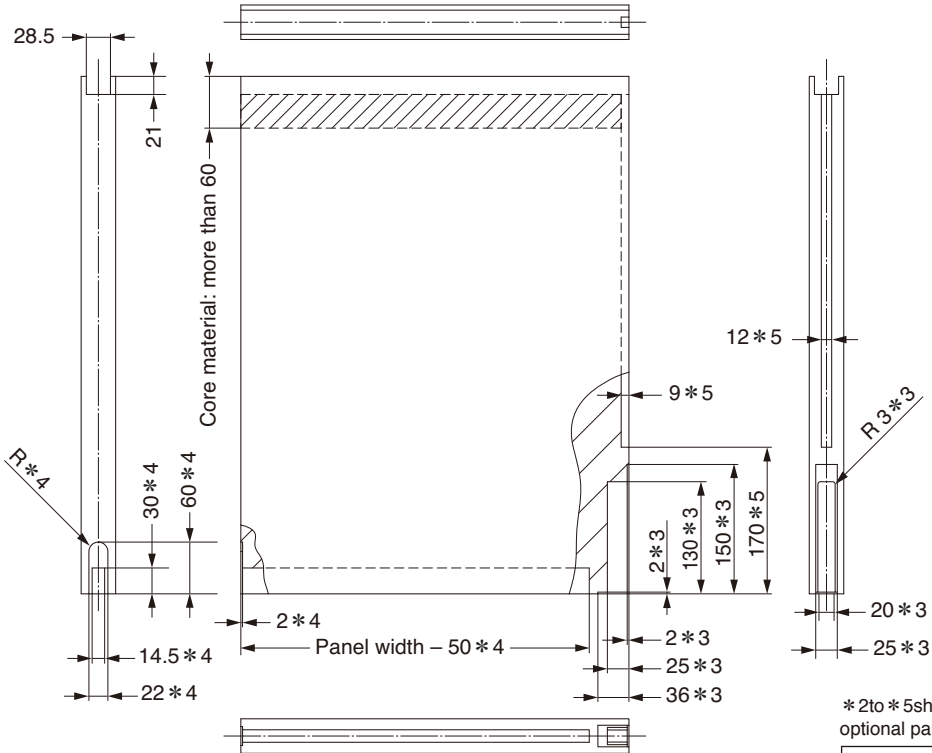
* 1 to * 4 shows process dimensions only when following optional parts are used.

Symbol	Part name
* 1	⑭ Magnet lower guide receiver
* 2	⑮ Magnet lower guide rail
* 3	⑨ Flush bolt
* 4	⑫ Bottom seal

● Stackable panel 2 (SP2) * Not required for three specification panel



● Sliding panel (CP)

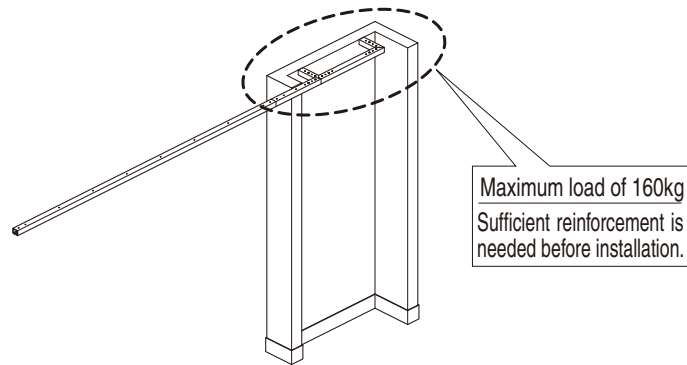


* 2 to * 5 shows process dimensions only when following optional parts are used.

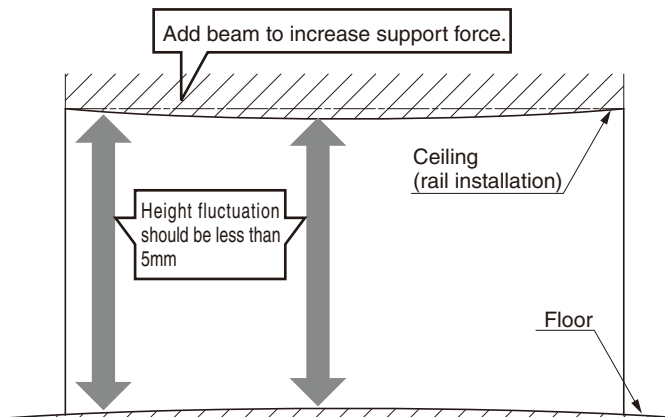
Symbol	Part name
* 2	⑪ Packing support rail
* 3	⑨ Flush bolt
* 4	⑫ Bottom seal
* 5	⑩ Packing

CHECK THE FOLLOWING PRIOR TO INSTALLATION

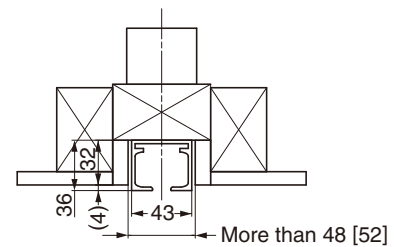
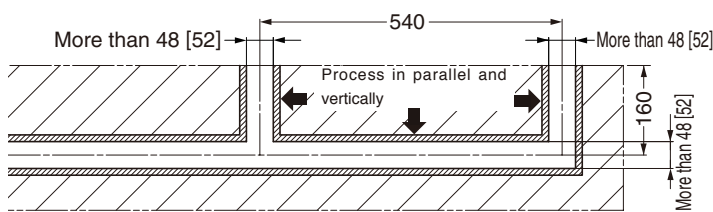
- Make sure that the ceiling is strong enough to support a load of 160kg (in the stacking part of the rail)



- Check ceiling for sag and floor for warp



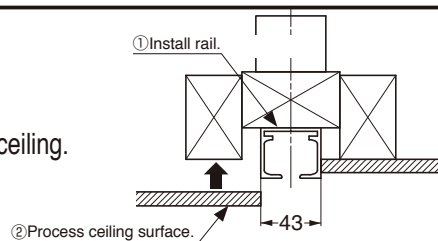
- Process when recessing the rail



Dimension in [] denotes when cloth is added.

■ when processing without gap between ceiling face and rail

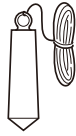
- At first, install the rail to reinforce material behind the ceiling.
- Then, process the ceiling face to meet rail mount dimensions.



TOOLS NEEDED FOR INSTALLATION



Phillips Screwdriver #2



Plumb * 1, * 2



Drill for wood 12mm dia. and 24mm dia. * 1



Saw for metal * 4

Lower guide pin adjustment tool



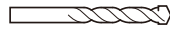
Spanner 22mm
Order code: 250-022-252
Part No.: FD80-HHSP



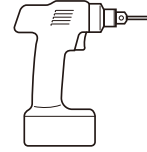
Screw driver * 4



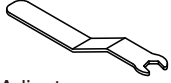
Hole opening drill: 3.5mm dia. * 1



Drill for Aluminum 4mm and 5mm dia. * 4



Electric drill * 4



Adjust spanner
Order code:250-024-506
Part No.:FDP40-SP10



Adhesive for synthetic rubber and wood * 3



Phillips tapping screw (pan head) * 1, * 4

* 1 used to install magnet lower guide. Prepare four Phillips pan head tapping screws 3×20. When steel or concrete is used as floor, suitable drill should be prepared, other than wood drill 24mm dia.

* 2 used when installing flush bolt (option). If floor is supported by steel or concrete, select suitable drill in place of the drill for wood 12 mm dia.

* 3 used for installing packing (option) (acrylic modification silicon resin, elastic adhesive or the like)

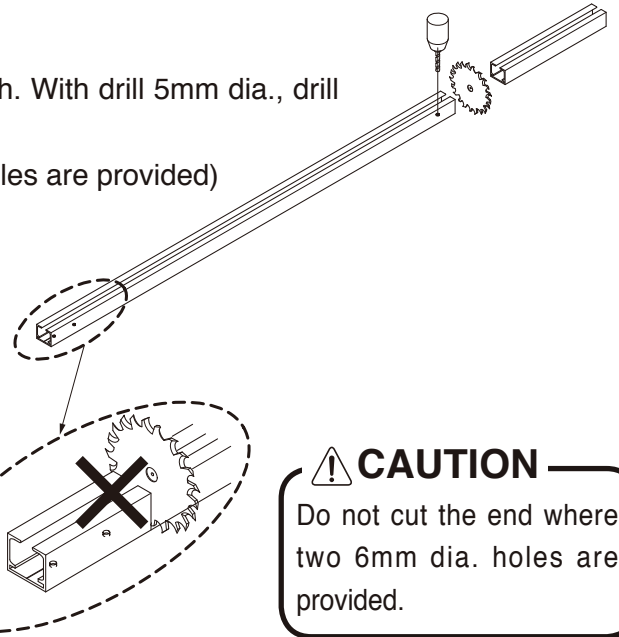
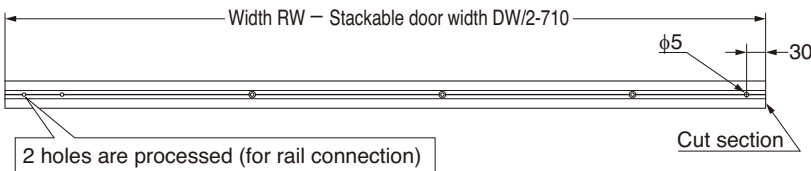
* 4 used to install bottom seal (option) Please prepare one Phillips pan head tapping screw 4×20.

INSTALLATION PROCEDURES

1 Cutting upper rail ① and processing a hole

Referring "Installation Drawing", cut the rail to required length. With drill 5mm dia., drill a hole. Refer to the illustration below.

Do not cut the side for rail connection hole (Two 6mm dia. holes are provided)



CAUTION

Clear rail from burr and aluminium dust.

CAUTION

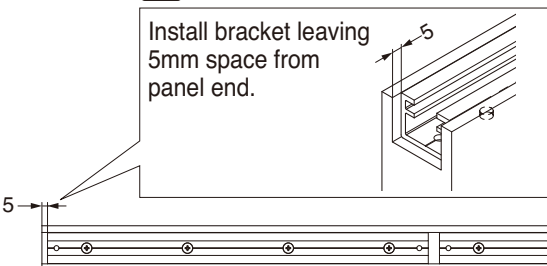
Do not cut the end where two 6mm dia. holes are provided.

2 Installing hanging bracket ⑦ to panel

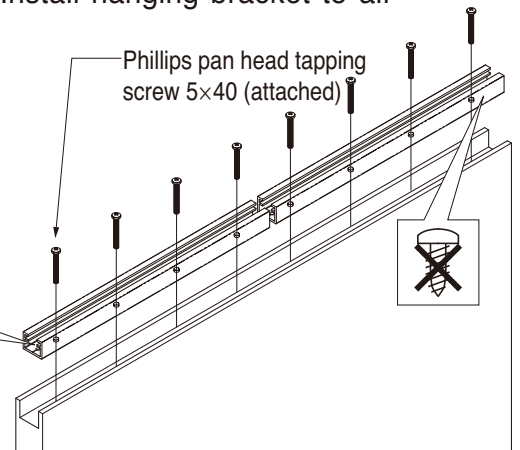
Fully insert hanging bracket into the cut-off at top end of panel. Install hanging bracket to all panels.

CAUTION

Install bracket leaving 5mm space from panel end.



*4.5mm hole at the end is not used.

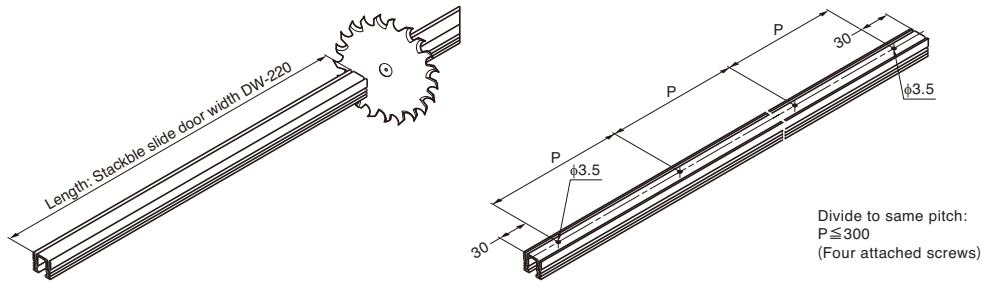


[Option 1] Installing magnet lower guide receiver ⑭ and magnet lower guide rail to Stackable door

Cut lower guide rail to the dimension illustrated below.

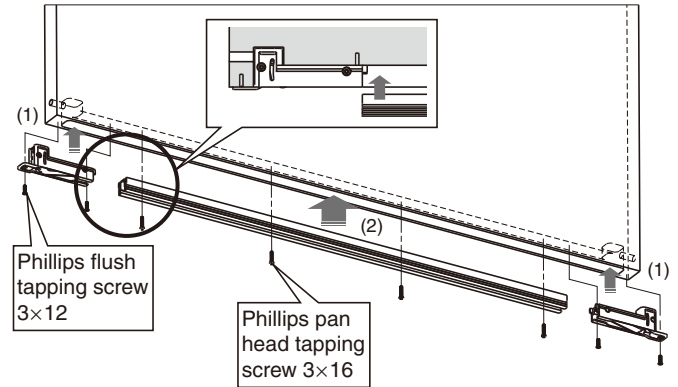
Be careful for deformation of rail. Cut surface must be clean (removing burr and cut powder).

- Provide screw holes, with the pitch less than 300 mm.
- At 30mm from both ends of rail, provide 3.5mm dia. hole with drill.



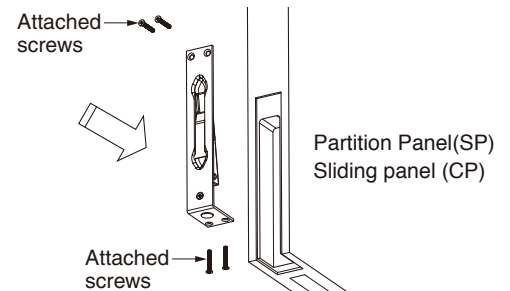
(1) Mounting parts to door bottom

- ⟨1⟩ Mount magnet guide support to both ends of Stackable slide door bottom.
- ⟨2⟩ Mount magnet guide support to convex of rail.
 - * Check the proper alignment between Magnet guide support and lower guide rail.



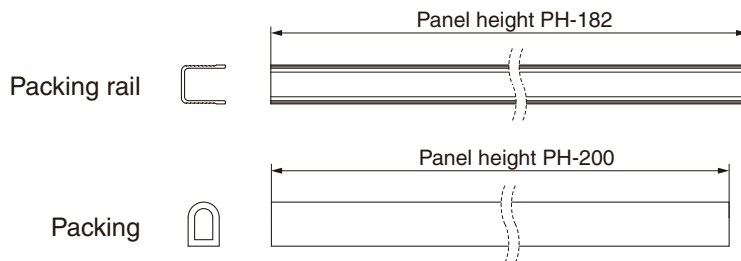
[Option 2] Installing flush bolt ⑨ to panel

Install flush bolt to the cut-off on Stackable panel.

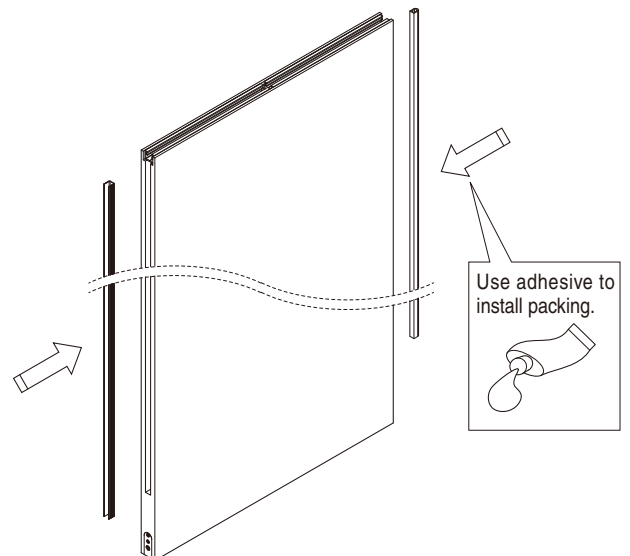


[Option 3] Installing packing ⑩ and packing support rail ⑪ to panel

Referring to the "Installation Drawing", cut packing and packing support rail to required length.



- Install packing and packing support rail to the groove of Stackable panel (SP) and sliding panel (CP).



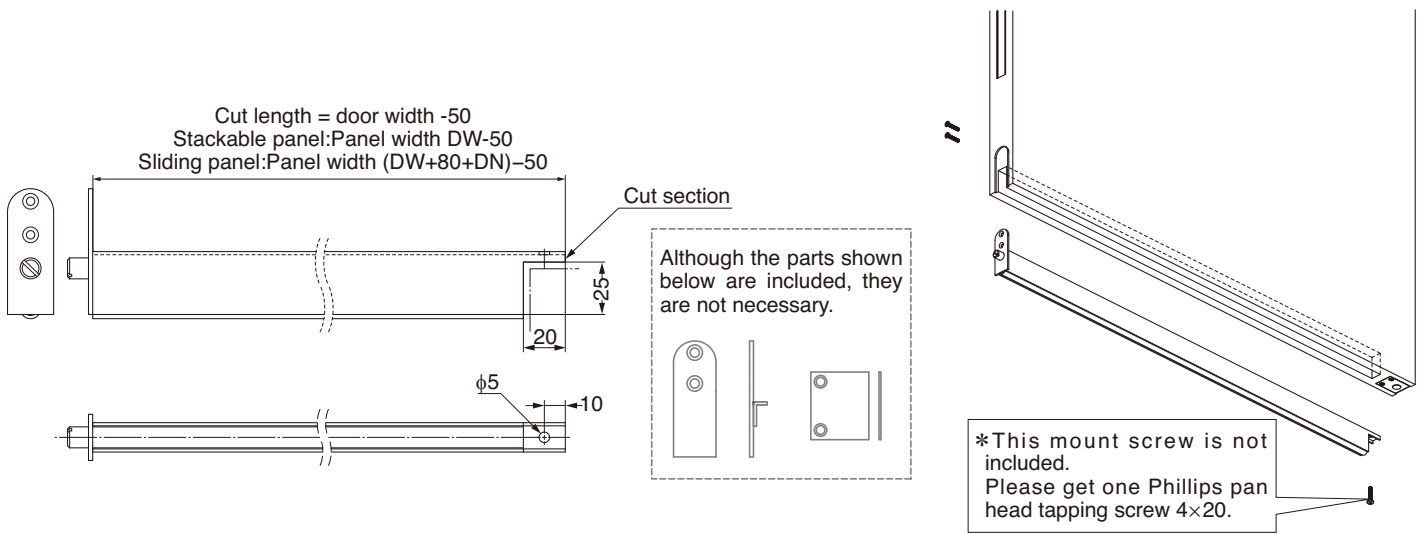
- When installing packing use acrylic modification silicon resin, elastic adhesive or the like.
- Insert packing support rail into groove of panel.

[Option 4] Installing bottom seal ⑫ to panel

- According to the "Installation Drawing", cut bottom seal to required length.

[Note] When installing bottom seal, use also flush bolt.

Then, cut bottom seal at cut side with a saw for metal. Then, make a hole with 5mm dia. drill.



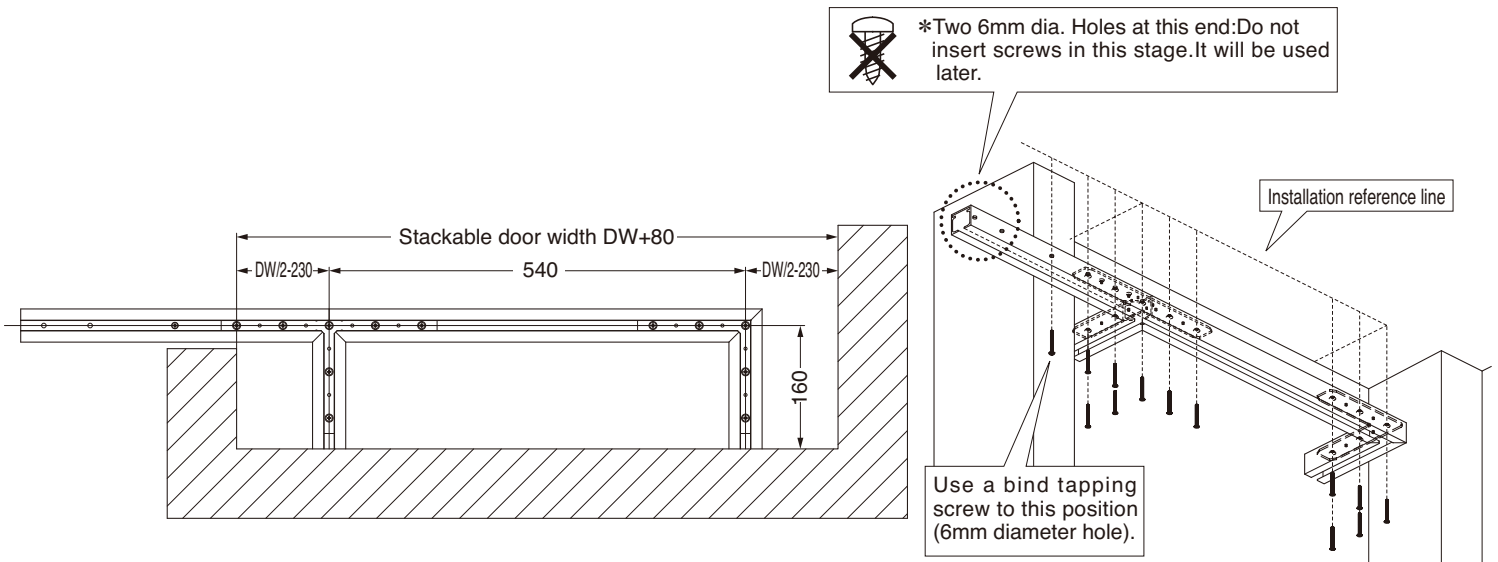
- After processing bottom seal, install it to the groove at panel bottom. And, fix it with mount screw.

3 Installing stacking rail ②

- * Illustration below shows right side stacking viewing from below.

Based upon illustration, draw installation reference line on the ceiling.

Aligning rail mount holes to the reference line, install the rail with attached screws.



! CAUTION

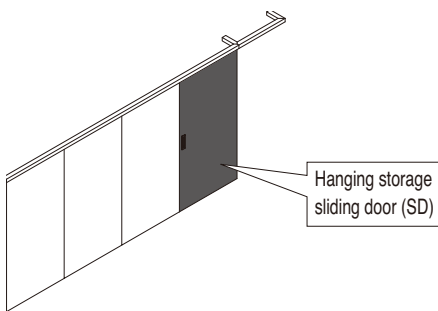
- Correctly screw-in the screw, without inclination.
- Depending upon the material of installation part, attached screw can not be used. In this case, prepare available screws separately.
- Never disassemble the stacking rail.

4 Installing upper rail and hanging panels

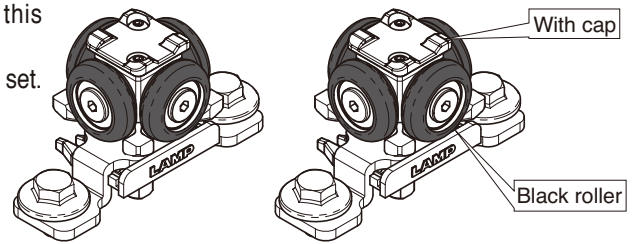
Install doors and panels in the following order.

[First]: Stackable door (SD) [second]: Panel 1 (SP1) [third]: Panel 2(SP2) [Fourth] Sliding panel (CP)

[1] Hanging stackable door (SD)



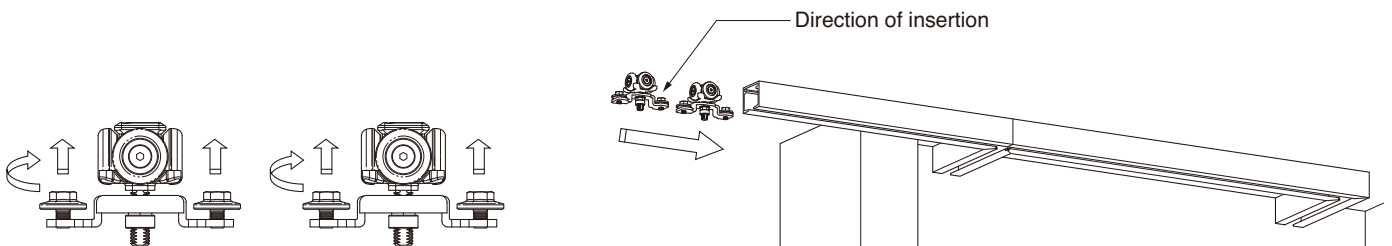
[1] The roller is used in this section is as shown. Never mistake the roller set.



(1) Inserting upper roller into rail

At first, loosen upper roller tightening bolts.

Then, insert upper roller from opening at stacking rail.

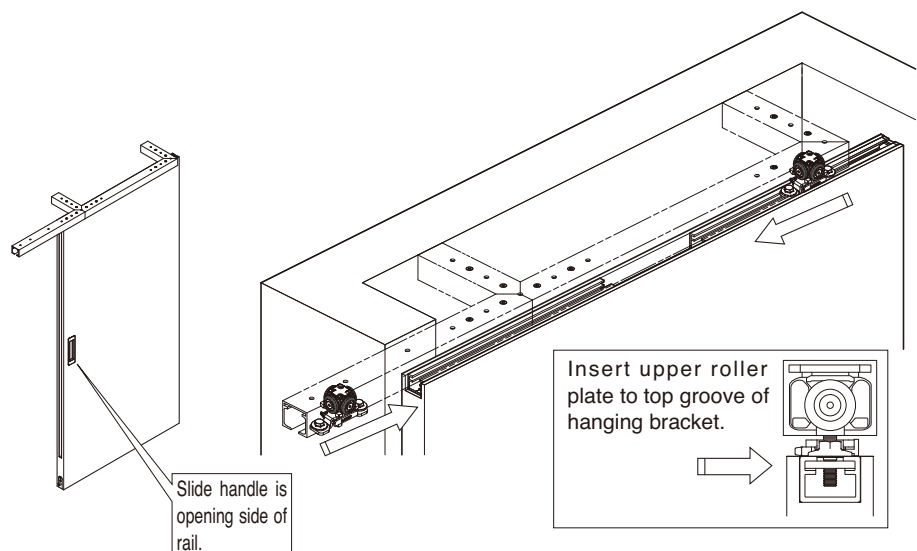


(2) Hanging stackable door

- Position stackable door at stacking rail.
- Place 7mm support under the slide door. Insert upper roller from the side of hanging bracket at top end of slide door.
- After installing two upper rollers, remove 7mm support.

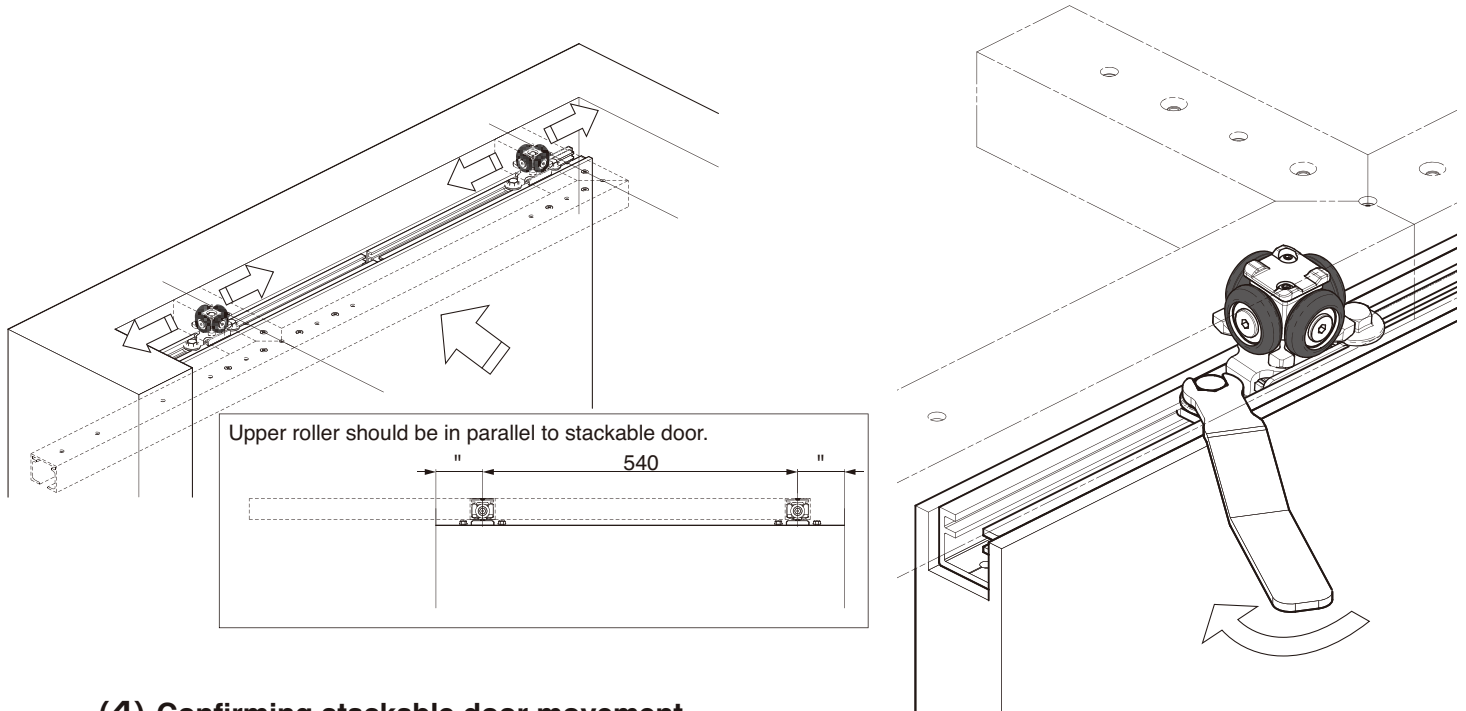


When hanging the door or panel, work with more than two persons.



(3) Adjusting upper roller mounting pitch, and tightening upper roller tightening bolt

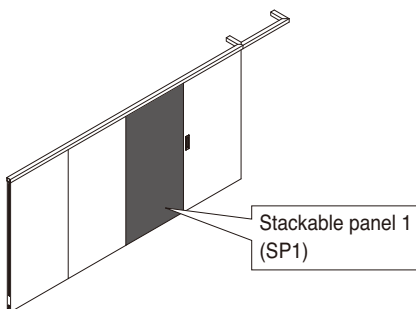
- Move upper roller position right-to-left to obtain best position such that stackable door is positioned precisely. Then, make adjustment so that upper roller is positioned in parallel to stackable door.
- After adjustment, tighten upper roller tightening bolt with spanner (10mm) to fix upper roller.



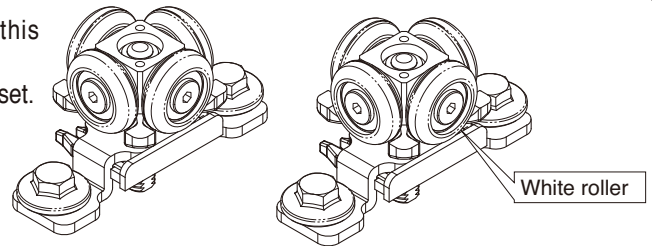
(4) Confirming stackable door movement

- Repeat sliding out operation of stackable door from stored position by 2 to 3 times to confirm the pitch of roller. When improper movement is found, readjust mounting pitch of roller.

[2] Hanging panel 1 (SP1)

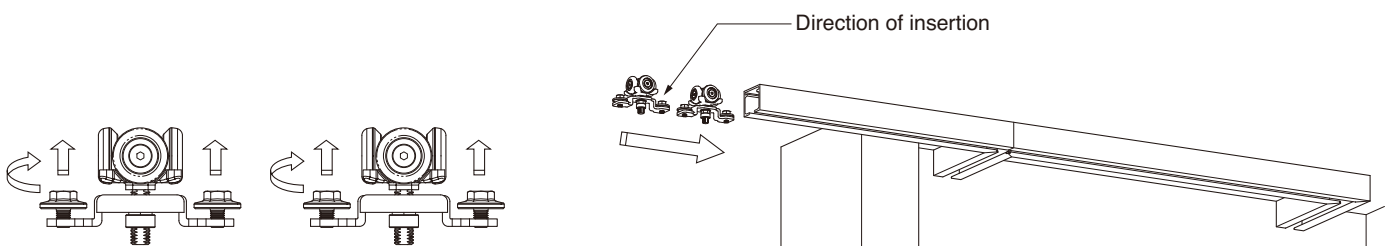


[2] The roller is used in this section is as shown. Never mistake the roller set.



(1) Inserting upper roller into rail

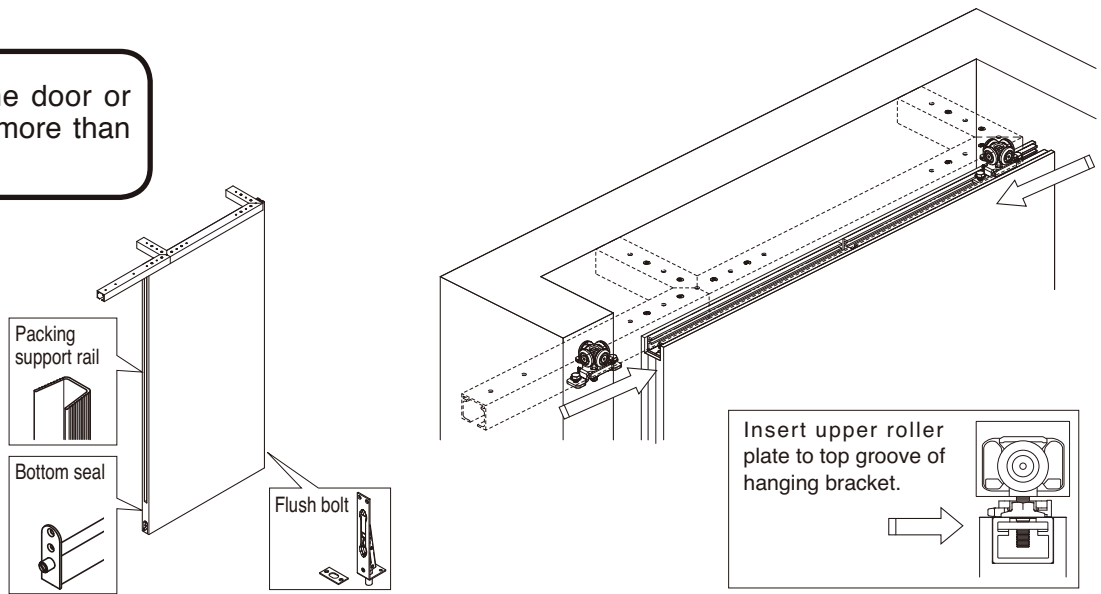
At first, loosen upper roller tightening bolts.
Then, insert upper roller from opening at stacking rail.



(2) Hanging panel 1 (SP1)

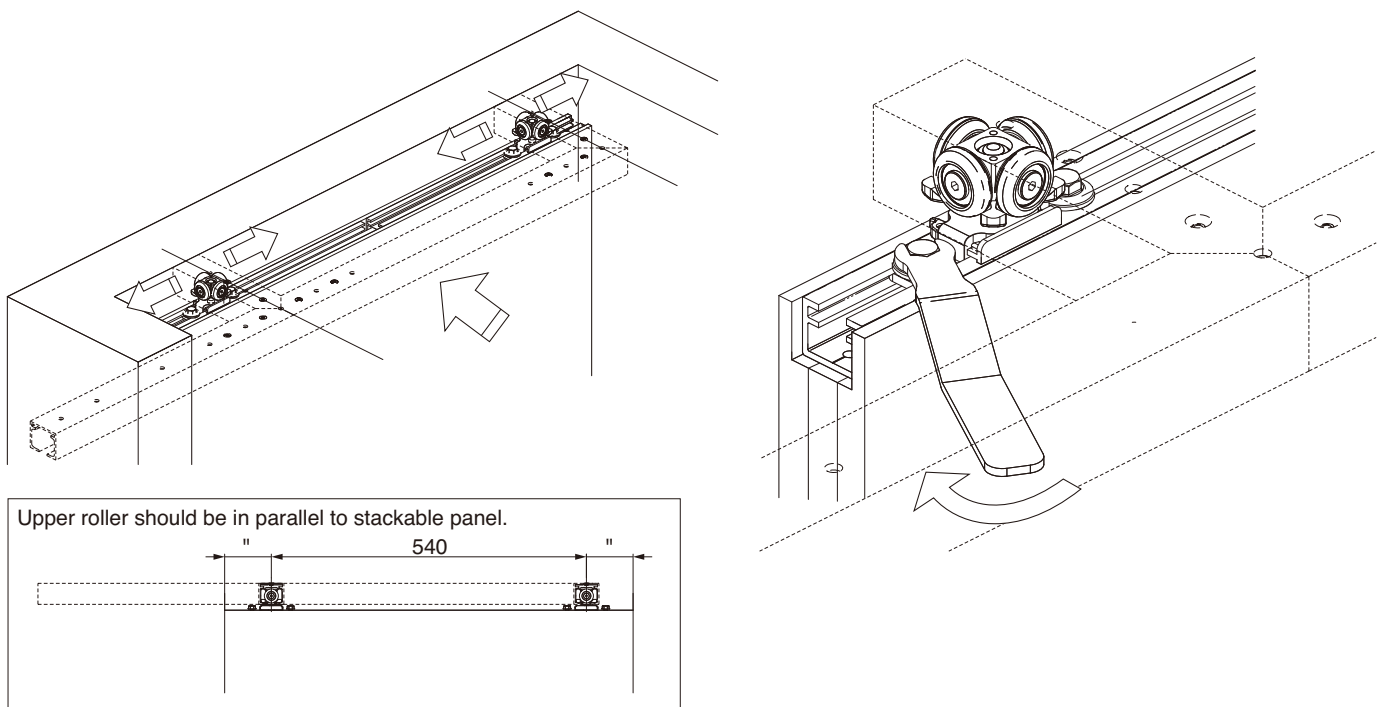
- Position panel 1 at stacking rail.
- Place 10mm support under the panel. Insert upper roller from the side of hanging bracket at top end of slide door.
- After installing two upper rollers, remove 10mm support.

⚠
When hanging the door or panel, work with more than two persons.



(3) Adjusting upper roller mounting pitch, and tightening upper roller tightening bolt

- Move upper roller position right-to-left to obtain best position such that stackable door is positioned precisely. Then, make adjustment so that upper roller is positioned in parallel to stackable door.
- After adjustment, tighten upper roller tightening bolt with spanner (10mm) to fix upper roller.



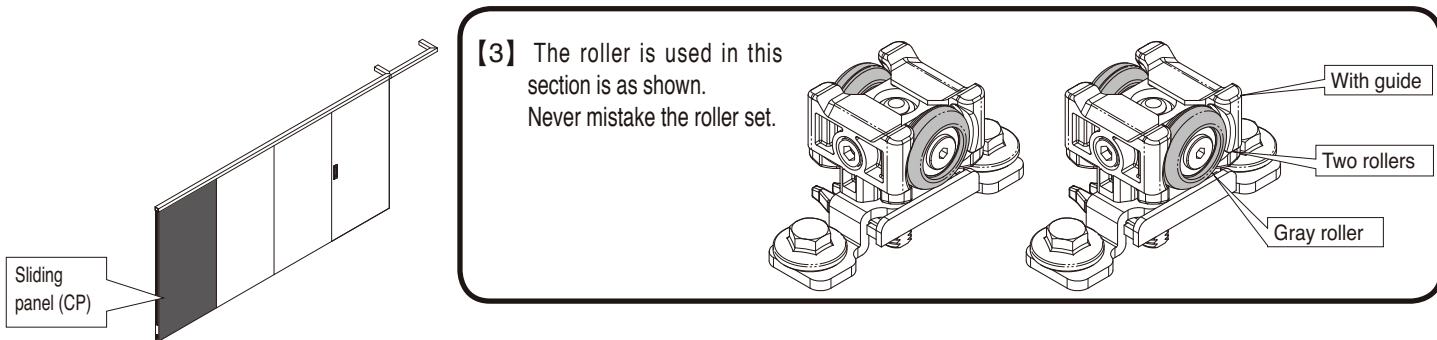
(4) Confirming Stackable panel movement

- Repeat sliding out operation of Stackable panel from stored position by 2 to 3 times to confirm the pitch of roller. When improper movement is found, readjust mounting pitch of roller.

[3] Hanging panel 2(SP2)

- * In case of three sliding doors proceed to procedure [4]. Suspend panel 2 (SP2) in the similar manner of panel 1 (SP1), and make roller adjustment. Then fix them.

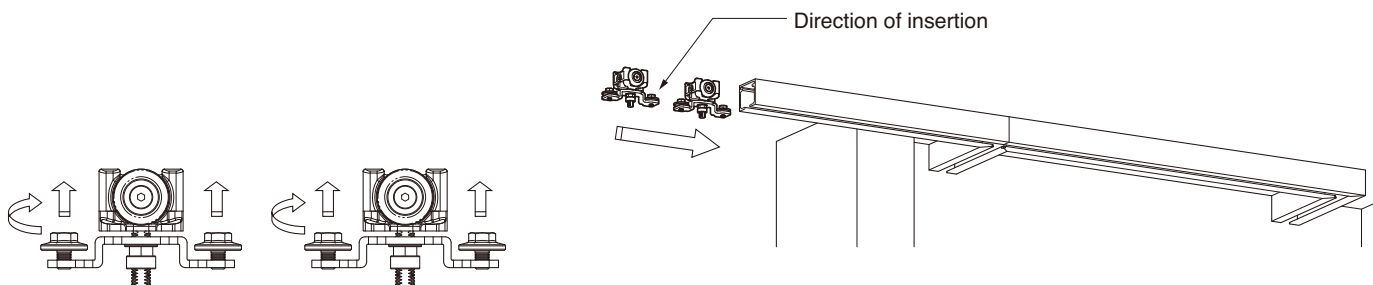
[4] Hanging sliding panel (CP)



(1) Inserting upper roller into rail

At first, loosen upper roller tightening bolts.

Then, insert upper roller from opening at stacking rail.

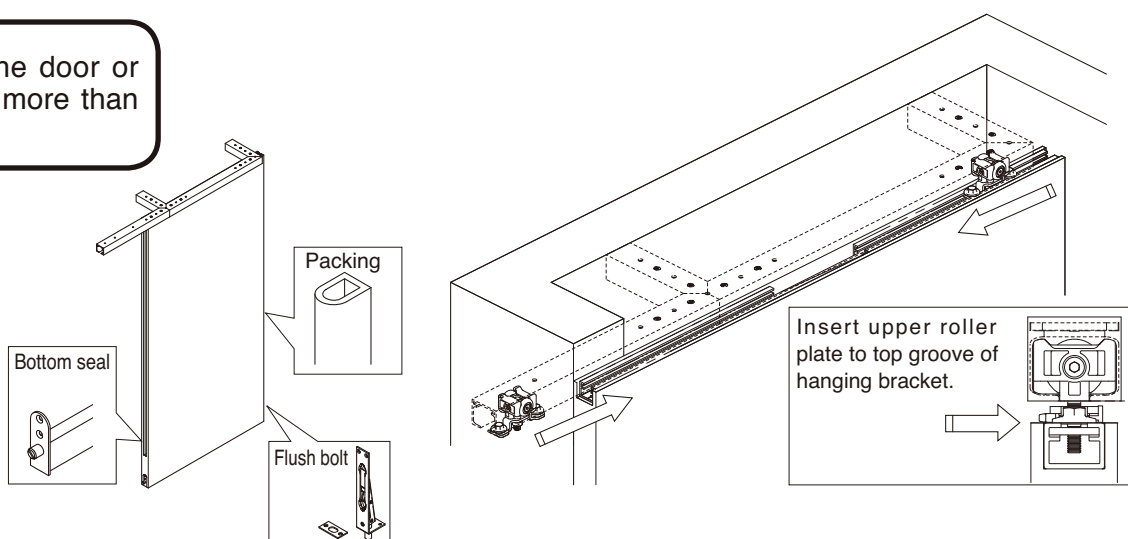


(2) Hanging sliding panel (CP)

- Position sliding panel at stacking rail. When optional parts are added to sliding panel, take ample care on directions of flush bolt and packing.
- Place 10mm support under the sliding panel. Insert upper roller from the side of hanging bracket at top end of slide door.
- After installing two upper rollers, remove 10mm support.



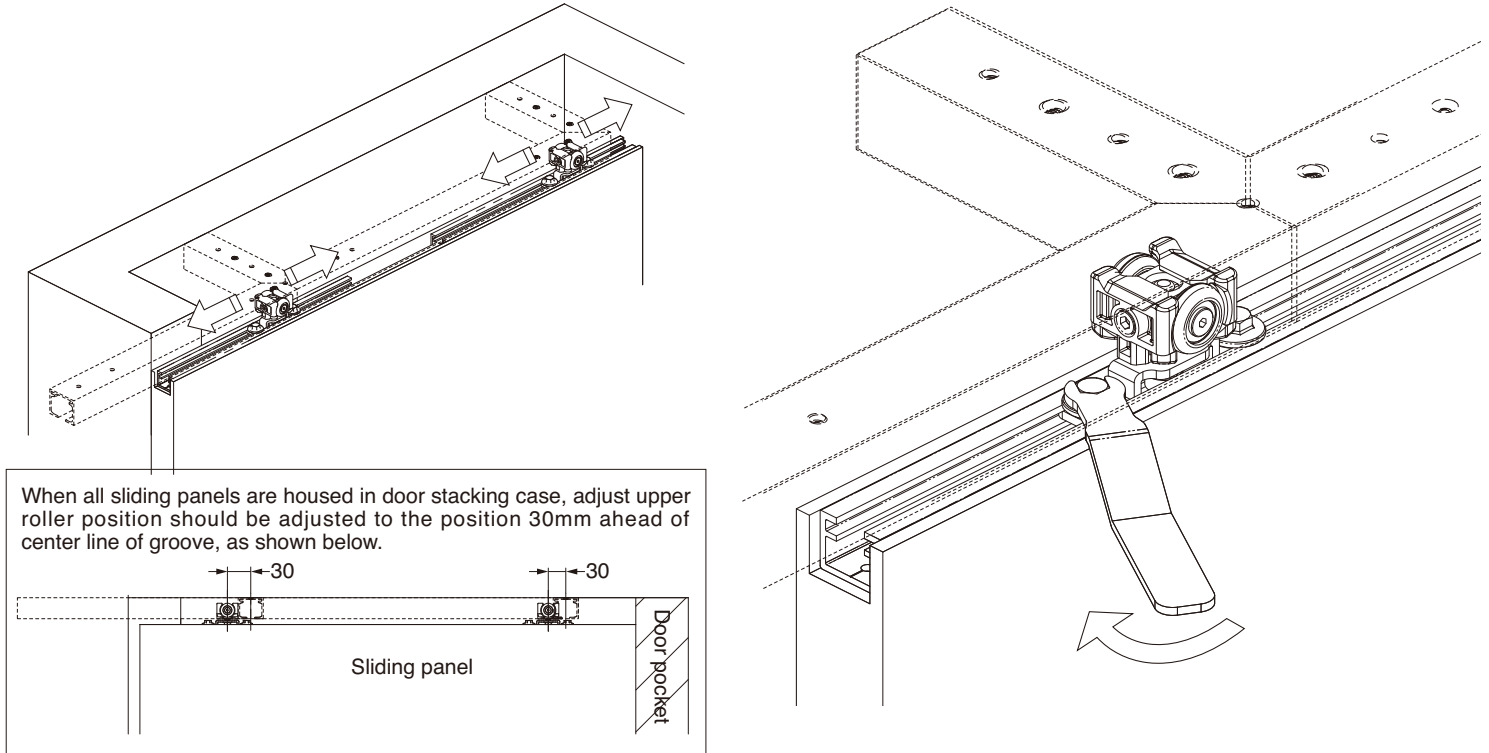
When hanging the door or panel, work with more than two persons.



(3) Adjusting upper roller mounting pitch, and loosening upper roller tightening bolt

Move upper roller position right-to-left to obtain best position such that stackable door is positioned precisely. Then, make adjustment so that upper roller is positioned in parallel to stackable door.

After adjustment, tighten upper roller tightening bolt with spanner (10mm) to fix upper roller.



(4) Confirming sliding panel movement

Sliding panel can be slide to lateral direction only.

(It is not possible for sliding panel to move deeper part of stacking rail.)

Repeat sliding operation of sliding panel by 2 to 3 times to confirm operating condition.

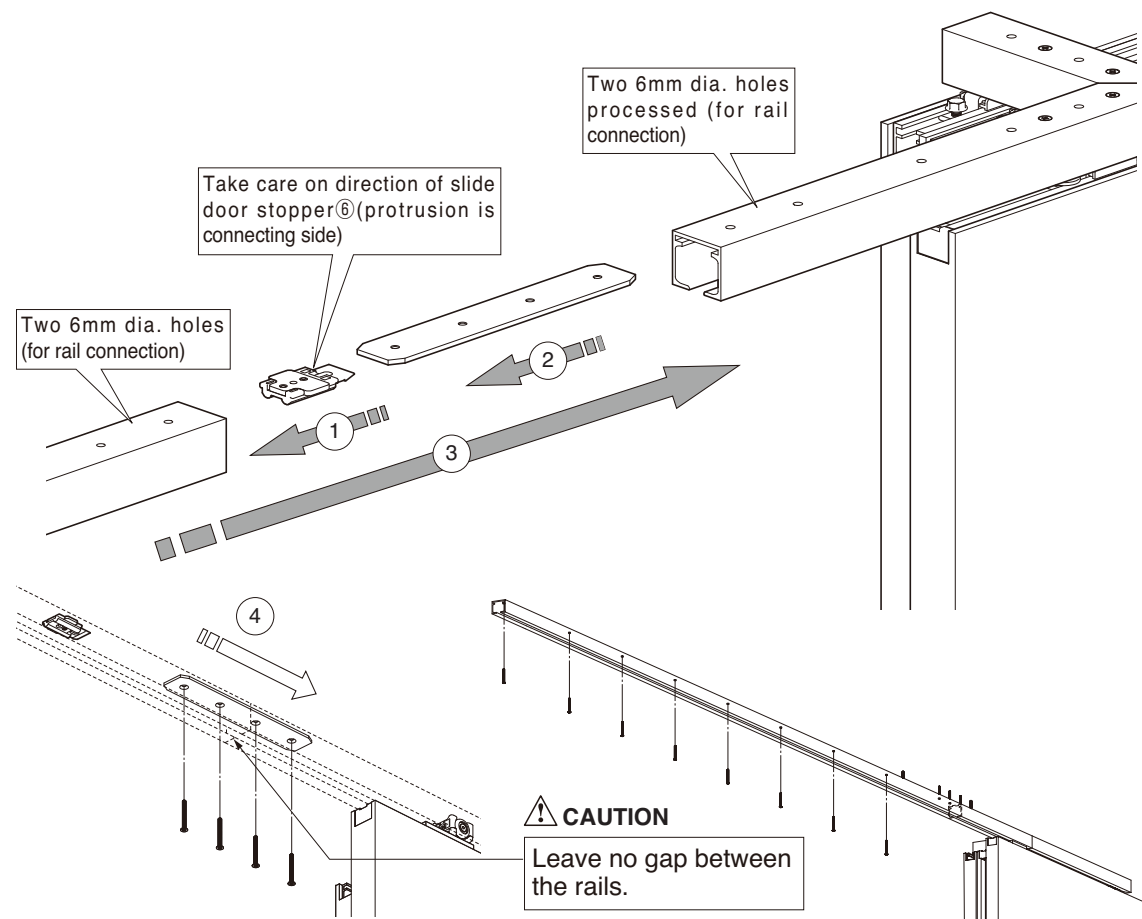
When improper movement is found, readjust mounting pitch of upper roller.

5 Installing upper rail

- [1] Insert slide door stopper ⑥ into upper groove at the side where two 6mm dia. holes are provided in procedure 1. (See figure below.)

Take care for the direction of stopper. Side of pointed projection is at the side of connection.

- [2] Insert connecting plate into upper groove of upper rail.
- [3] Sliding connecting plate to insert to upper groove of stacking rail, and connect upper rail to stacking rail.
⚠ Leave no space between the upper rail and the stacking rail.
- [4] Align connecting plate flush hole with connecting hole on upper rail and stacking rail, fix the parts with four tapping flush screws.
- [5] With attached bind tapping screws, fix upper rail.



6 Panel-to-panel alignment (Adjusting vertical position)

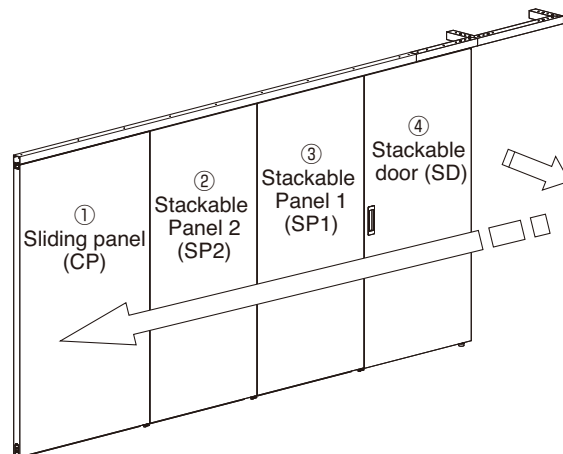
- Pull out all stored Stackable panels and doors along upper straight rail as shown.

【1】

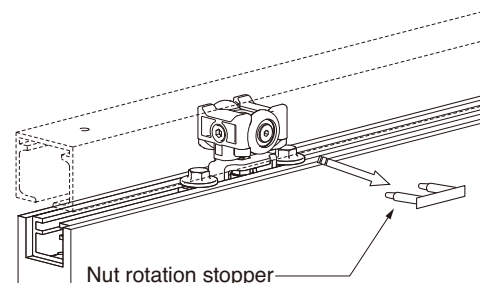
Order is:

- ① Sliding panel (CP)
- ② Stackable panel 2 (SP2)
- ③ Stackable panel 1 (SP1)
- ④ Stackable door (SD)

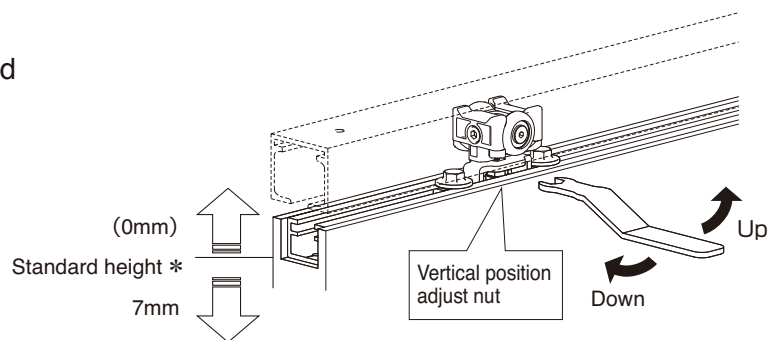
Align joints between vertical frame and panel in the order of ① to ④



【2】 Pull out nut rotation stopper from upper roller.

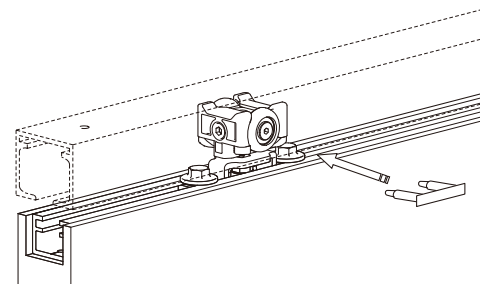


【3】 Adjust upper roller vertical position adjusting nut with attached spanner (10mm), to required height.



*Default setting:
Dimension between rail to panel: 10mm

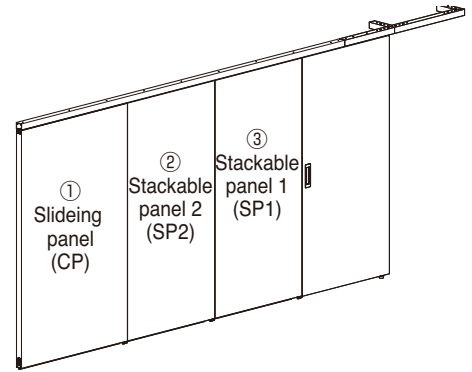
【4】 After adjusting in the order of ① to ④, reinstall nut rotation stopper to upper roller.



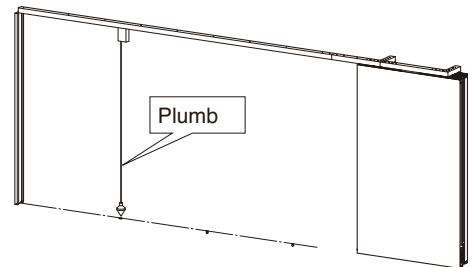
[Option 5] Installing strike for flush bolt

Install strike for flush bolt on each panel in the order shown below, confirming mount position for each panel.

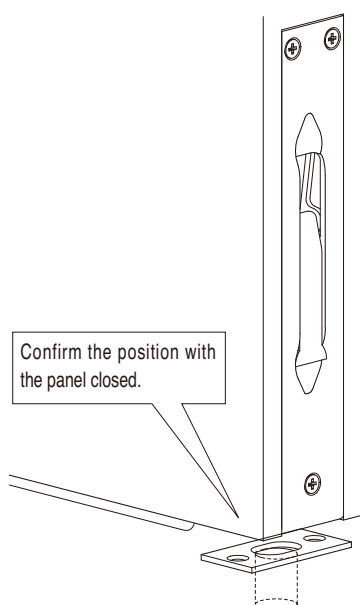
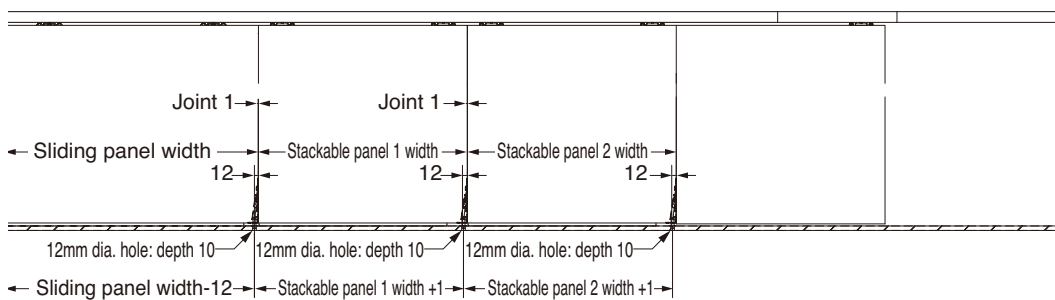
- ① Sliding panel (CP)
- ② Stackable panel 2 (SP2)
- ③ Stackable panel 1 (SP1)



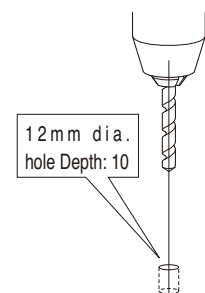
- (1) Using a plumb, determine the correct position for installing a strike for flush bolt, which should be just under the upper rail.



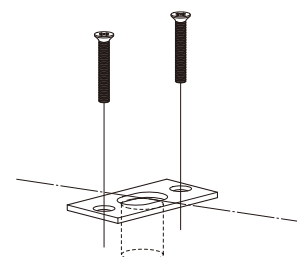
- (2) Install flush bolt strike as shown below. After installation, extend all panels to confirm they are installed correctly.



- (3) After determining strike position, drill floor to open 12mm dia. hole with depth of 10mm.

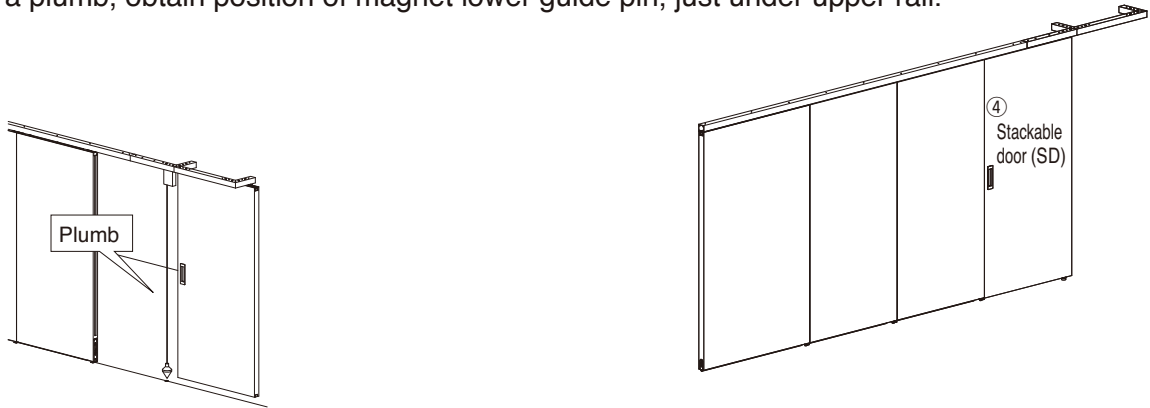


- (4) With two attached mount screws, fix the strike on the floor.

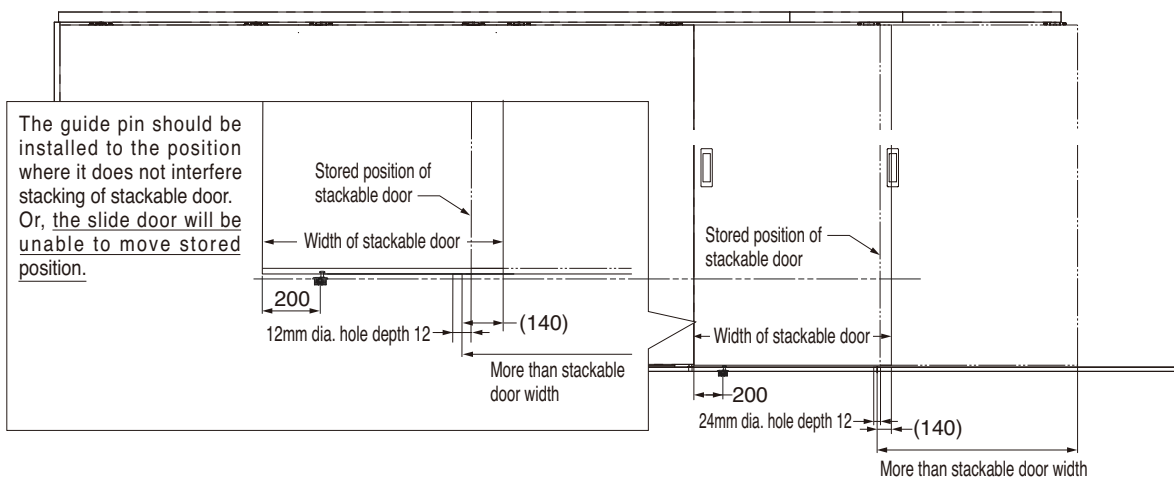


[Option 6] Installing magnet lower guide pin ⑬ to the floor

(1) Using a plumb, obtain position of magnet lower guide pin, just under upper rail.



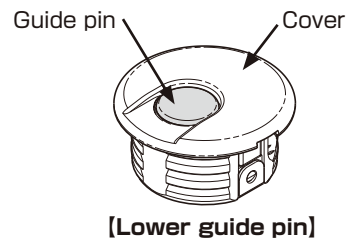
(2) The illustration below shows working dimension for the guide pin. Confirmation should be done, actually closing the door in position.



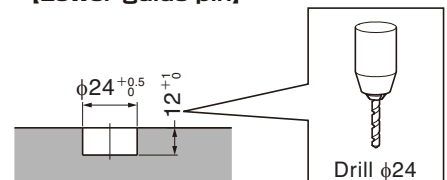
(3) **Processing lower guide pin mount hole**

Using a plumb, determine the hole positions just vertically under the positions of upper rail of sliding door. To the determined positions, process mount holes (depth of 12mm) for lower guide pin using 24mm dia. drill.

* Guide pin mount holes should be processed correctly to vertical status. After opening the holes, remove processed foreign matters from the hole.



[Lower guide pin]

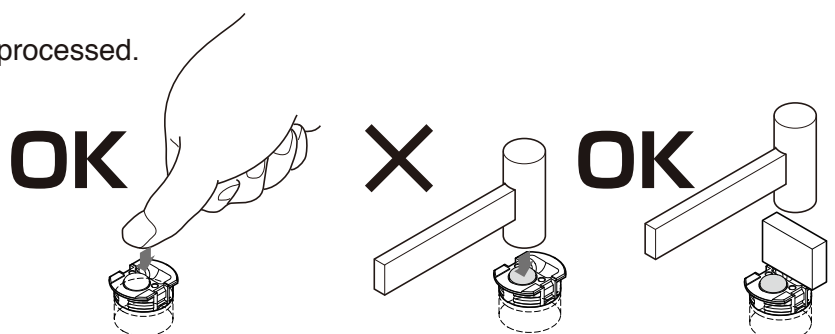


(4) **Lower guide pin**

Insert lower guide pin into mount hole processed.

* In this stage, do not fix screws. (to be fixed in procedure7).

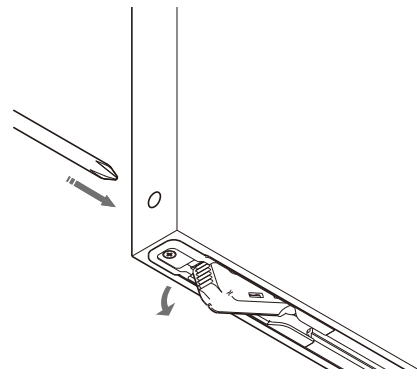
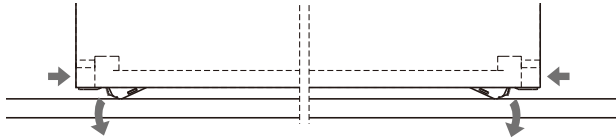
The guide pin is likely to be damaged if hit with a hammer. If you have difficulties inserting the pin, please use a wood block.



(5) Setting height of magnet guide support

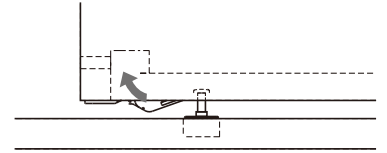
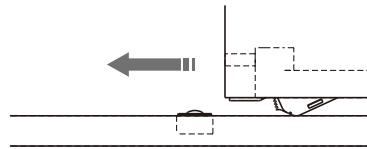
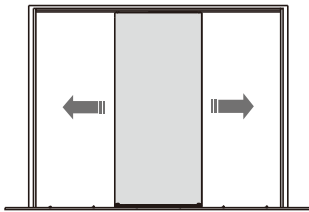
<1> Lowering guide pin support

Insert a screwdriver or the like into hole at lower frame to push magnet guide support button. Then, guide pin support comes down. For every magnet guide support, carry out this procedure.



<2> Automatic setting by slowly sliding the door

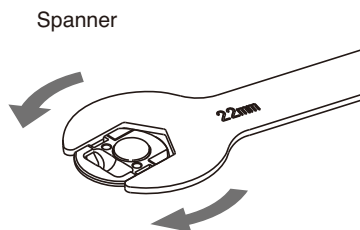
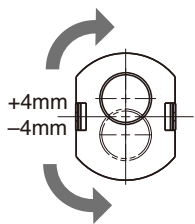
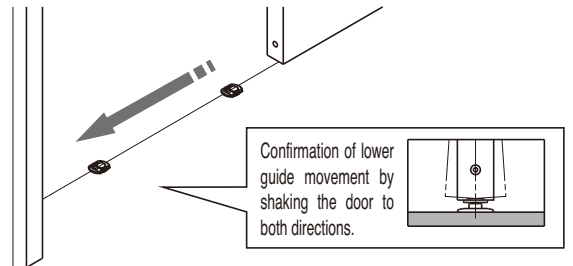
Slowly slide the door to pass the lower guide pin on the floor. When door passes on lower guide, lower guide pin support goes over lower guide pin. This automatically sets the height of guide pin support.



(6) Confirming lower guide movement

Slowly slide the door to make it passes over lower guide pin, for confirmation.

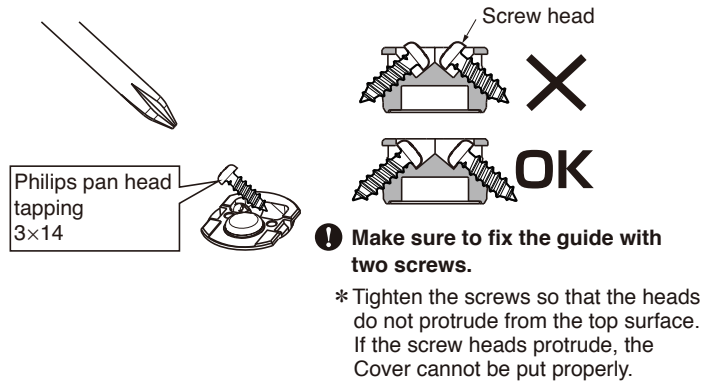
When sliding the door to both directions, the lower guide pin should be attracted by magnet guide support being drawn inside of door guide rail. Confirm this movement. If the above movement is not confirmed, adjust lower guide pin main unit direction, using the exclusive tool or spanner (22 dia.).



(7) Fixing lower guide pin

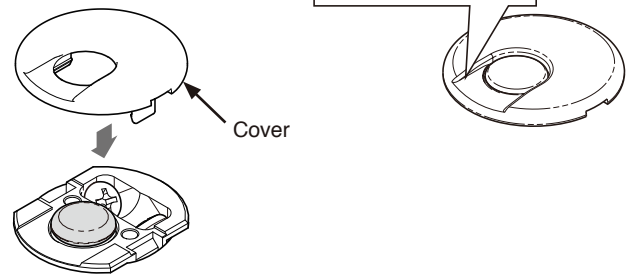
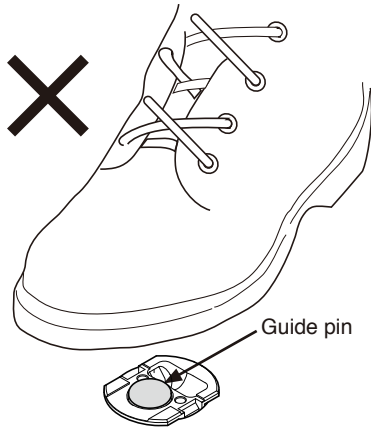
After adjusting of lower guide pin direction, fix lower guide pin to the floor with attached two Phillips pan head screws 3×14. After fixing the pin, insert cover to the lower guide pin until click-sound is heard.

Carry out this procedures for all lower guide pins.



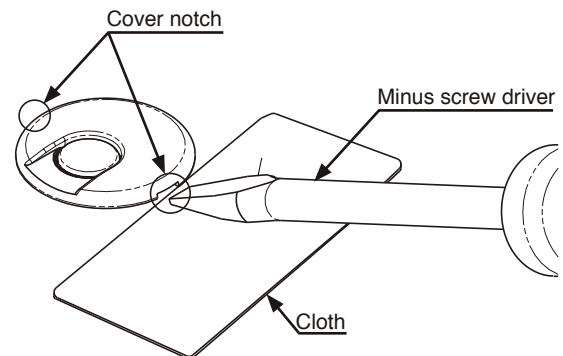
Put the Cover.

The Lower guide pin can be damaged if not protected by the Cover. Do not step on the guide pin during installation, and put on the Cover at once.



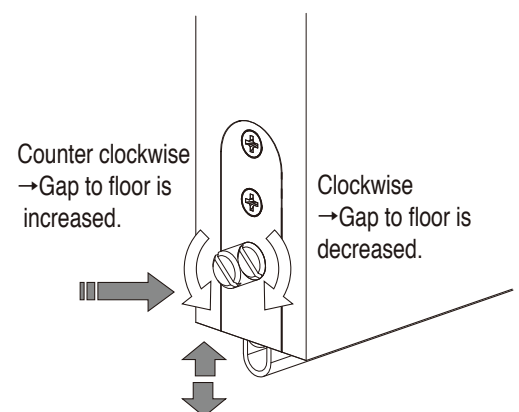
Removal of cover

Apply the screw driver to notch and remove guide pin. * Use protective cloth on the floor to prevent damaging floor.



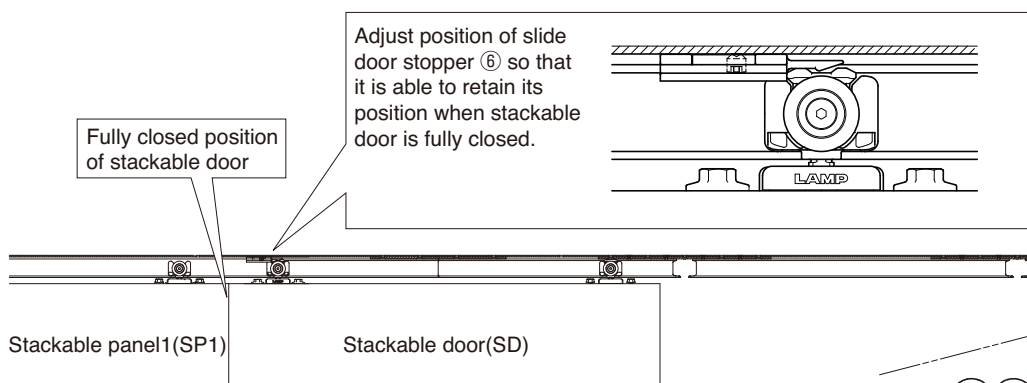
[Option 7] Adjusting bottom seal

- (1) By rotating bottom seal pin with screw driver, clearance between bottom seal packing and floor.
- (2) For each panel, adjust the floor-to-bottom seal packing by turning this bottom seal pin.
- (3) After fixing the stackable panel with flush bolt, confirm vertical position of bottom seal.



7 Fixing door stopper on stackable door

- 【1】 Loosen Hex. head fix screw of slide door stopper. Then, temporarily tighten at the position for closed position of the slide door. Refer to the illustration below.

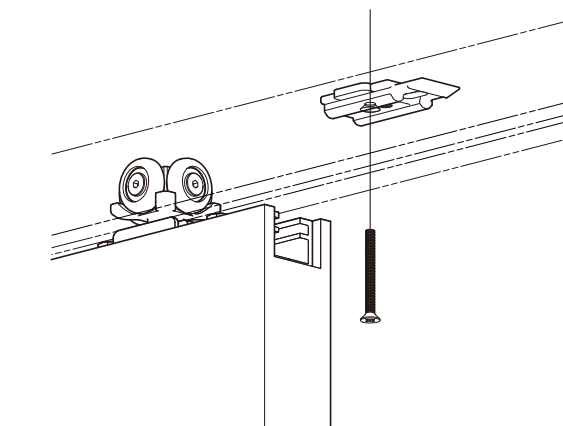
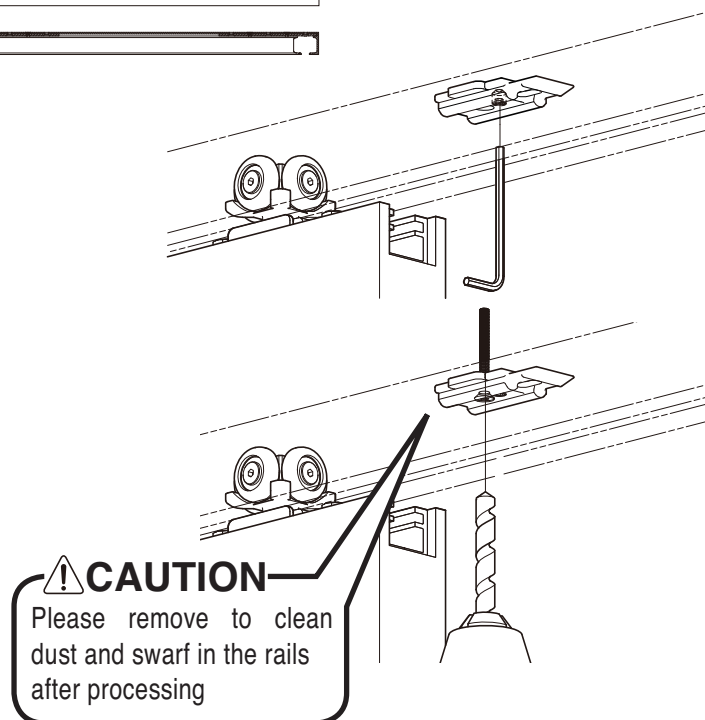


- 【2】 Confirm that closed position is maintained when storing the slide door.

- 【3】 After determining the position of slide door stopper, with 4mm dia. drill open a hole on upper rail by way of the flush hole of slide door stopper.

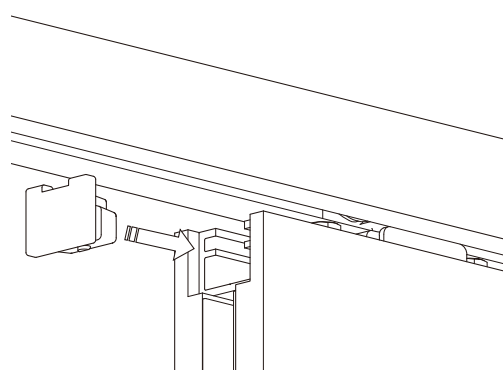
- 【4】 After opening the hole on the upper rail, please be removed from the upper rail in the dust and swarf.

- 【5】 Using the hole of upper rail, fix the slide door stopper with attached Phillips tapping flush screw through flush hole on slide door stopper.



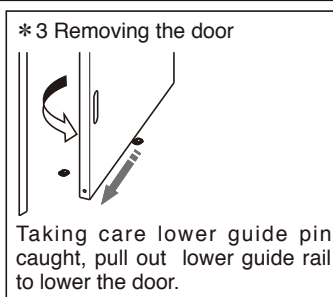
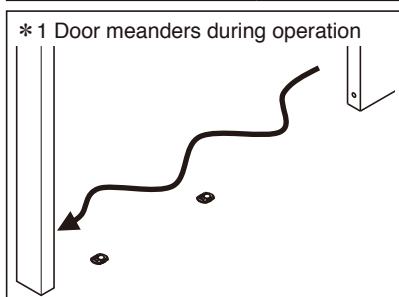
8 Mounting end cap

Insert the end cap at the panel top (2caps per panel).



■ TROUBLESHOOTING

TROUBLE	CHECK	SOLUTION
Panel does not go in Stacking rail.	Check if panel's upper roller mount pitch deviates from stacking rail.	Adjust upper roller mount pitch. If upper roller set bolt is loosened, retighten. Refer to " 4 Installing upper rail and hanging panels"
	Check correct rollers are installed.	Upper roller for sliding panel cannot go into stacking rail. It is needed to replace upper roller. Refer to " 4 Installing upper rail and hanging panels".
	Check if magnet lower guide stays in stackable door.	Adjust position of stackable door to obtain smooth movement, by changing upper roller position on stackable door. Refer to " 4 Installing upper rail and hanging panels".
Panel is caught during operation.	Check if screw installing upper rail to ceiling is loosened.	Upper roller may contact to screw. Loosen the screw.
	Check if upper rail is jointed to stacking rail correctly.	At upper rail-to-stacking rail joint, attached rail connect plate should be used to prevent rail dislocation. Refer to " 5 Installing upper rail."
	Check if upper roller of stackable door and stopper are installed correctly.	Upper roller of stackable door shall be caught by stopper on straight rail. If upper roller for stackable door on stackable panel is installed wrongly, replace upper roller. Or, readjust the position of stopper. Refer to " 4 Installing upper rail and hanging panels".
Magnet lower guide does not work properly.	Check if magnet lower guide support and magnet lower guide rail parts are installed at bottom of stackable door.	Confirm that all parts are installed. Confirm the door or panel arrangement. Refer to " [Option 6] Installing magnet lower guide pin ⑬ to the floor.
	Check clearance between stackable door and floor.	The clearance between door and floor must be 7mm. Correct to this dimension. Refer to " 4 Installing upper rail and hanging panels".
Abnormal sound during opening/closing.	Check if foreign matter or aluminum powder remains in upper rail.	Clean inside of upper rail.
	Check roller of rail for existence of foreign matter or aluminum powder.	Remove the roller by removing rail, and clean the roller.
	Check if the screw installing rail to ceiling for looseness.	Retighten screw to avoid roller contact against screw.
Heavy movement of panel.	Check if panel contacts to the floor.	Confirm rail screw is not loosened. Readjust panel height so that clearance between panel bottom and floor becomes 10mm,7mm for stackable door.
Panels move freely.	Check if upper rail is installed horizontally.	Reinstall upper rail horizontally using level gauge.
No response of lower guide pin during sliding	Check if dust is caught at lower guide pin.	Dust or dirt on guide pin causes poor function of guide pin. Raise pin by finger and remove dust or dirt.
	Check if magnet guide support height adjustment was done correctly.	Set height of magnet guide support, referring " [Procedure 4 Adjustment] ".
	Check if clearance between door bottom and floor is set correctly.	When the clearance becomes out of specified range (10mm ±4mm), normal operation is not done. Door height must be adjusted.
Lower guide pin functions, but pin would not entered in the rail.	Check if lower guide pin position was adjusted in correct procedures.	Determine lower guide pin position, referring [Procedure 5 Confirming lower guide function and positioning of lower guide pin] .
	Check if absorbing section of magnet guide support catches foreign matters.	Remove foreign matters.
* 1 Door meanders during operation	Check if lower guide pin position is done correctly.	Readjust lower guide pin position, referring [Procedure 5 Confirming lower guide function and positioning of lower guide pin] .
*3 Precautions when removing the door	Confirm that lower guide pin is pulled out from door.	Remove ceiling-mount metal. Pull out guide pin from door, referring the illustration below right.



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